Filing Date: December 10, 2003

Title: Cross-Linked Heparin Coatings and Methods

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REMARKS

This responds to the Office Action mailed on <u>April 15, 2008</u>. Claims 1, 8, 21-23 and 25 are amended, claims 4-7, 12, 18-20, and 24 are canceled and as a result, claims 1-3, 8-11, 13-17, 21-23 and 25-41 are now pending in this application.

§112 Rejection of the Claims

Claims 1-3, 8-11,13-17, 19-22, 25-28 and 40-41 were rejected under 35 U.S.C. § 112, first paragraph, as lacking adequate description or enablement. The Examiner found that the specification while being enabling for benzyl-bis(dimethylsilylmethyl)x-oxycarbamoyl-heparin, was not enabling for "a cross-linkable biomolecule rendered surface adsorbable by conjugation with 1-30 hydrophobic benyzlated silyl groups", "a cross-linkable biomolecule", "prosthetic hydrophobic unit and a heparin activity biomolecule" and/or "a heparin activity biomolecule".

Applicant has amended independent claims 1 and 8 to recite species of a cross-linkable biomolecule. The species are heparin, heparan sulfate and chondroitin sulfate. Support in the specification for these species is found at page 10, lines 4-9.

These changes overcome the § 112 rejection for the claims recited in item 3 of the office action dated April 15, 2008.

Claims 1-3, 8-11,13-17, 19-22, 25-28 and 40-41 were rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically the Examiner fails to find support for the language "1-30 hydrophobic benzylated silyl group" which was added by amendment on 1/18/2008.

Applicant traverses the rejection. The specification, discloses that Tsang 6,595,588 at page 2, line 17 provides "1 to 30 hydrophobic silyl moieties conjugated to heparin, with the hydrophobic silyl moieties bound to a surface via hydrophobic bonding interactions. However this attachment is a particular disadvantage of adsorbable heparins in that they generally have a short resident time in vivo and are easily leached over a period of hours.

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Further, the specification as relating to a preferred embodiment, at page 6, lines 18-19, states "The conjugate of at least one prosthetic hydrophobic unit and a heparin activity biomolecule can have from 1 to about 30 hydrophobic silvl moieties conjugated to the heparin activity biomolecule." The heparin activity biomolecules are crosslinked. Claims 20-23 recite the element "wherein the conjugate of at least one prosthetic hydrophobic unit and a heparin activity biomolecule is from 1 to 30 hydrophobic silyl moieties conjugated to the heparin activity biomolecule. Hydrophobic prosethetic unit is a silyl moiety. (see specification at page 21, line 9. Applicant has amended the claims to recite silvl moiety in reference to formula I to more fully define this element. Formula I was disclosed in 5,955,588 which was incorporated by reference in the specification as filed at page 34, lines 17-18. The claims recited in the rejection of item 4 are patentable as the amendments overcome the § 112 rejection.

Claims 19-22 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. Claims 19-20 are canceled, claims 21-22 are amended to recite to the silyl moiety of claim 8 and a cross linkable-biomolecule of claim 8. The amendments to claims 21-22 overcome the § 112 rejection of item 5 and place the claims in condition for allowance.

The amendments to the claims and the remarks are believed to place the claims in condition for allowance. Applicant would like to thank the Examiner for the telephone discussion of the rejection of the claims prior to receiving the Office Action dated April 15, 2008.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 13-4213.

Respectfully submitted,

/Janeen Vilven/ Janeen Vilven, Reg. No. 47,156 Direct line (505) 998-6134

AMENDMENT AND RESPONSE UNDER 37 CFR \S 1.116– EXPEDITED PROCEDURE

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PEACOCK MYERS, P.C. Attorneys for Applicants Post Office Box 26927

Albuquerque, New Mexico 87125-6927

Telephone: (505) 998-6134 Facsimile: (505) 243-2542 Customer No.: 005179

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